

# MODIFICATION INSTRUCTIONS

for the

## ***KODAK X-Omatic* MULTILOADER 700**

Service Code 3053

### **MODIFICATION No. 26**

#### **Type 1 Selective**

PURPOSE:  
To improve the cassette centring.

**IMPORTANT** : Use qualified service personnel to install this modification !

**SERIAL NUMBERS** : 50 Hz units all serial numbers  
: 60 Hz units all serial numbers

**INSTALLATION TIME** : Approx. 1.5 hours

**SPECIAL TOOLS** : none

**PARTS REQUIREMENTS** : Mod Kit No. 26 PN 9181506

**PLEASE NOTE**

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**PARTS LIST**

PART NUMBER	DESCRIPTION	QUANTITY
9181506	MODIFICATION KIT No 26 consists of:	
MA 3053-26	MODIFICATION INSTRUCTIONS	1
	CENTRING CLUTCH BRAKE ASSEMBLY consists of:	
4853111	NUT M3	2
9281511	BRAKE BELT TENSIONER	2
9281581	BRAKE BELT	1
9281771	PLATE	2
4282691	SCREW M3x20	2
4282011	SCREW M5x30	2
9281531	MOUNTING BRACKET	1
4853031	NUT M5	4
4797371	PIN	1
9281541	THREADED SHAFT	1
4480171	WASHER 5.3 mm	3
9281621	SPRING	1
9280981	BRAKE STOP	1
4283291	SCREW M4x8	2
4480032	WASHER 4.3 mm	2

**INTRODUCTION**

The CENTRING CLUTCH BRAKE is replaced to ease the adjustment and to avoid kinking of the BRAKE BELT when it is replaced.

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## **INSTALLATION**

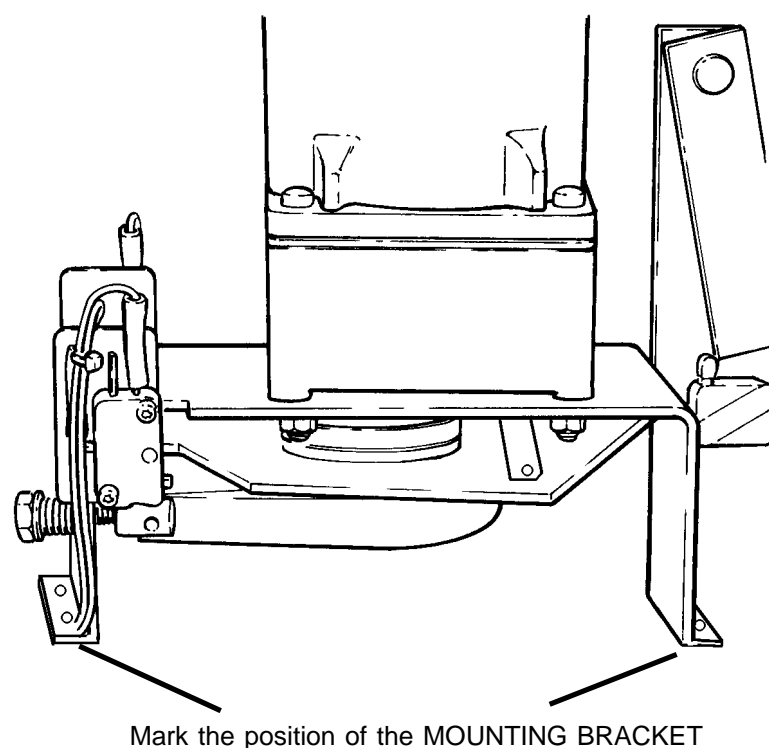
The installation of this modification consists of two parts. Part 1 covers the adjustment of the CENTRING CLUTCH and part 2 covers the installation of the new parts. Part 1 has only to be done if the ADJUSTMENT NUT of the CENTRING BRAKE is turned in almost to the end.

1. Switch off the ML700, open the TOP COVER and the left-hand PANEL.
2. If the ADJUSTMENT NUT of the CENTRING BRAKE is turned in too far, proceed with PART 1, or else proceed with part 2.

### **PART 1**

The CENTRING CLUTCH is a "SLIPPING CLUTCH DEVICE". This CLUTCH may wear out over the years and the torque is reduced. It is possible to increase or decrease (whatever is necessary) the torque. However in the field it is not possible to measure the torque. This means, the torque has to be adjusted by trial and error.

1. Mark the position of the MOUNTING BRACKET on the BASE PLATE.



Mark the position of the MOUNTING BRACKET

figure 1

2. Manually move the CENTRING BARS to their outermost position.

3. Take off the C-RING and the CONNECTING PIN from the CENTRING LINK. Observe the WASHERS on the LINKAGE. Retain all parts for further use.

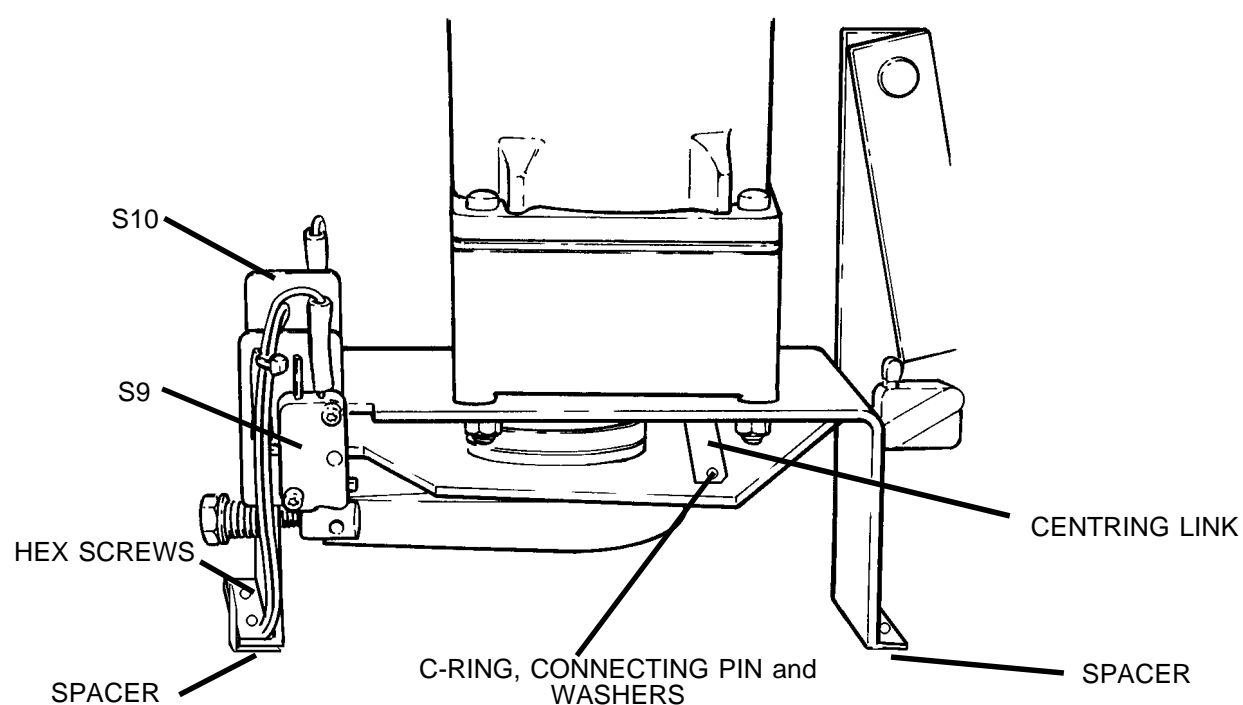


figure 2

4. Unplug the CENTRING MOTOR M2.
5. Disconnect SWITCHES S9 and S10. Record the routing of the wires and the location of the WIRE TIES.
6. Take out the 4 HEX SCREWS.
7. Take off the complete MOTOR and CLUTCH ASSEMBLY.

#### CAUTION

**Between the BASE PLATE and the MOUNTING BRACKET are a varying amounts of SPACERS. These SPACERS are used to make the CLUTCH ASSEMBLY parallel to the CASSETTE TRANSPORT. Do not mix up these SPACERS.**

8. Put the MOTOR ASSEMBLY on a flat surface and flip it over (bottom must be at the top).
9. Take off the BRAKE BELT and discard it with its mounting hardware.

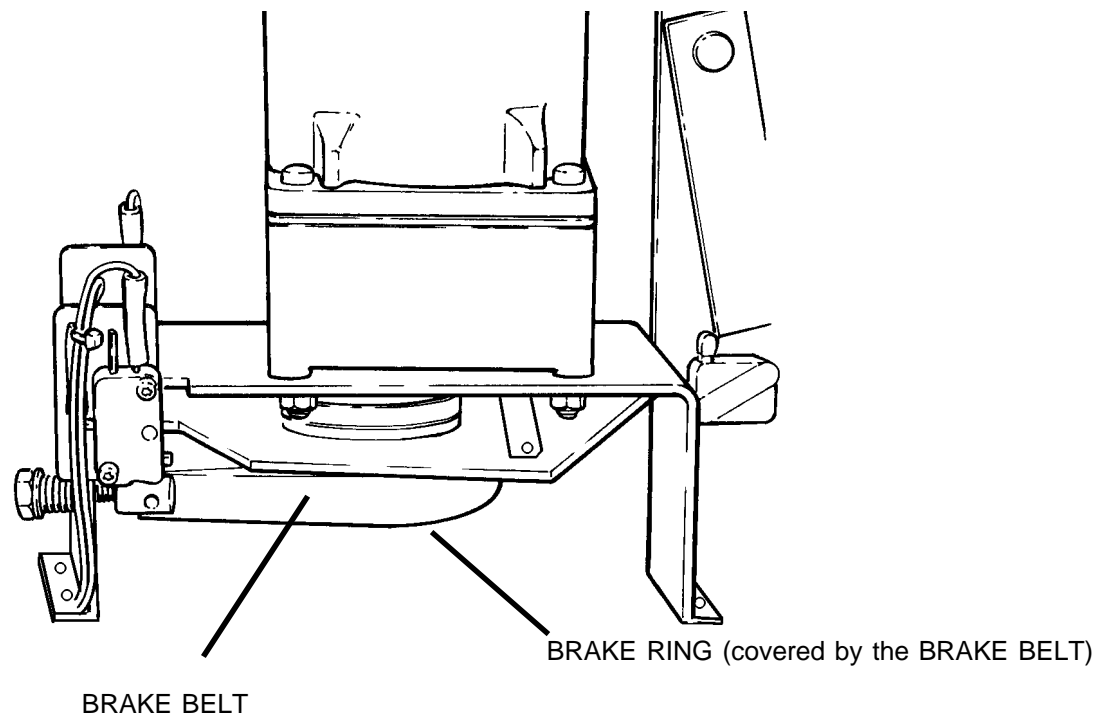


figure 3

10. Take off the BRAKE RING. It is clamped with one SCREW to the CLUTCH ASSEMBLY.
11. Take out the COUNTERSUNK SCREW.

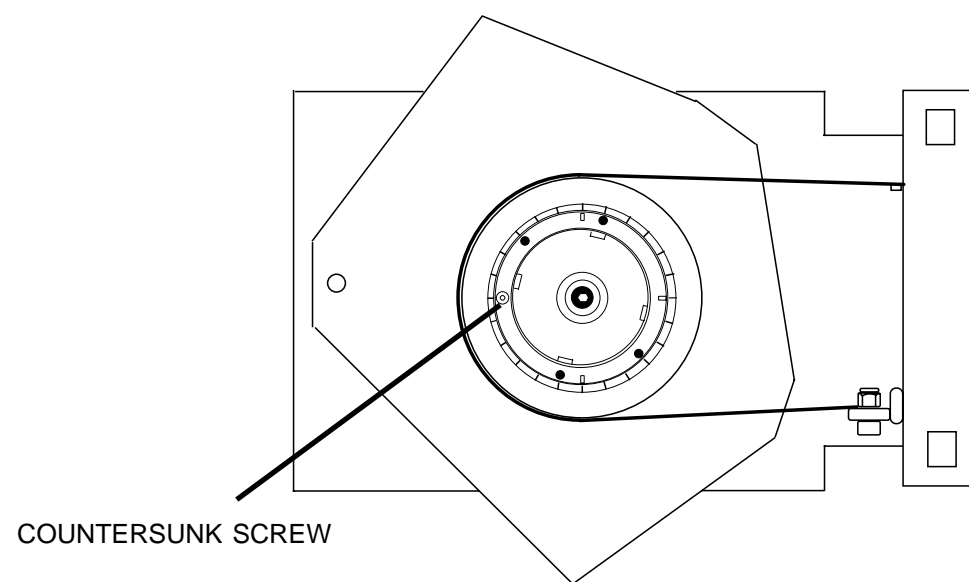
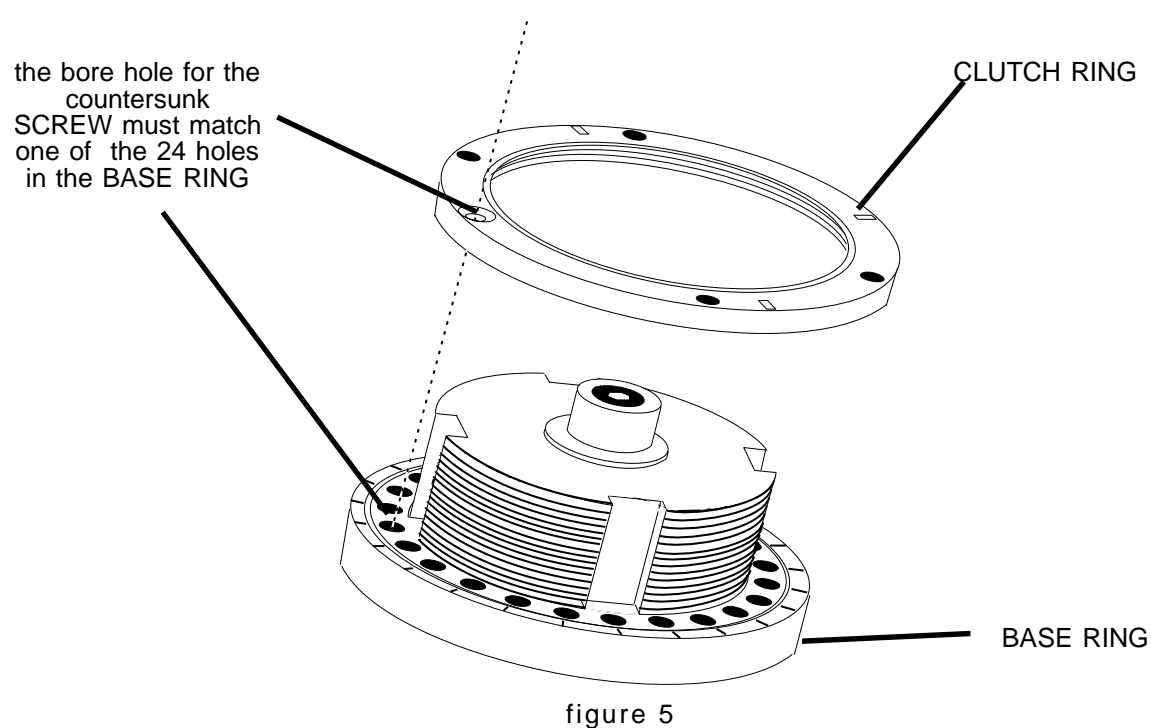


figure 4

- 12.** Carefully turn the CLUTCH RING with a WATER PUMP GRIP ( SLIP-GROOVE JOINT PLIERS) as required.  
 clockwise = torque is increased  
 counter-clockwise = torque is decreased  
 Always turn the CLUTCH RING for a full step. there are 24 steps marked at the CLUTCH, it will not be possible to insert the COUNTERSUNK SCREW fully. This SCREW is used as a lock to prevent the CLUTCH RING from coming loose.

- 13.** Insert the COUNTERSUNK SCREW and mount the BRAKE RING.



- 14.** Proceed with PART 2.

## PART 2

- 1.** If not already done in PART 1, mark the position of the CENTRING MOTOR MOUNTING BRACKET on the BASE PLATE.
- 2.** Take out the 4 HEX SCREWS. See figure 6 on the next page.
- 3.** Take off the complete MOTOR and CLUTCH ASSEMBLY.

### CAUTION

**Between the BASE PLATE and the MOUNTING BRACKET are a varying amount of SPACERS. These SPACERS are used to make the CLUTCH ASSEMBLY parallel to the CASSETTE TRANSPORT. Do not mix up these SPACERS.**

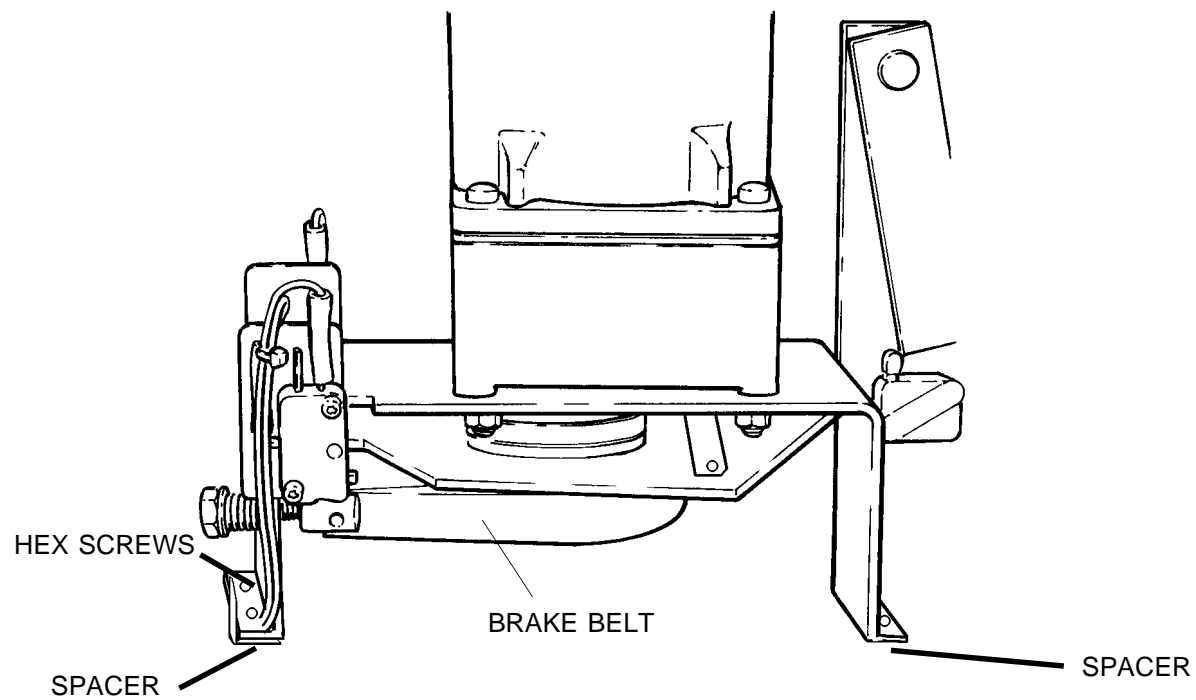


figure 6

4. If not already done in PART 1, discard the BRAKE BELT and its MOUNTING HARDWARE.
5. Slide the new CENTRING BRAKE ASSEMBLY over the BRAKE RING and fasten it with 2 SCREWS and WASHERS to the CENTRING MOTOR MOUNTING BRACKET. See figure 7 on the next page.
6. Install the CENTRING MOTOR ASSEMBLY. Use the marks made on the BASE PLATE as reference. Fix it with the 2 left-hand SCREWS only. Ensure that the SPACERS removed in PART 1 step 7 or in PART 2 step 3 are in the correct position.
8. Mount the BRAKE STOP to the right-hand side of the CENTRING MOTOR ASSEMBLY. Use the 2 SCREWS PN 4283291 and the 2 WASHERS PN 4480032 from the modification kit. See figure 7 on the next page. Do not tighten the 2 SCREWS.
9. Tighten the ADJUSTMENT NUT a bit. See figure 7 on the next page.
10. Move the BRAKE STOP in until it touches the BRAKE BELT TENSIONER. Fasten the MOUNTING SCREWS.
11. If the adjustments described in PART 1 have been made proceed with step 12, else proceed with the adjustments.



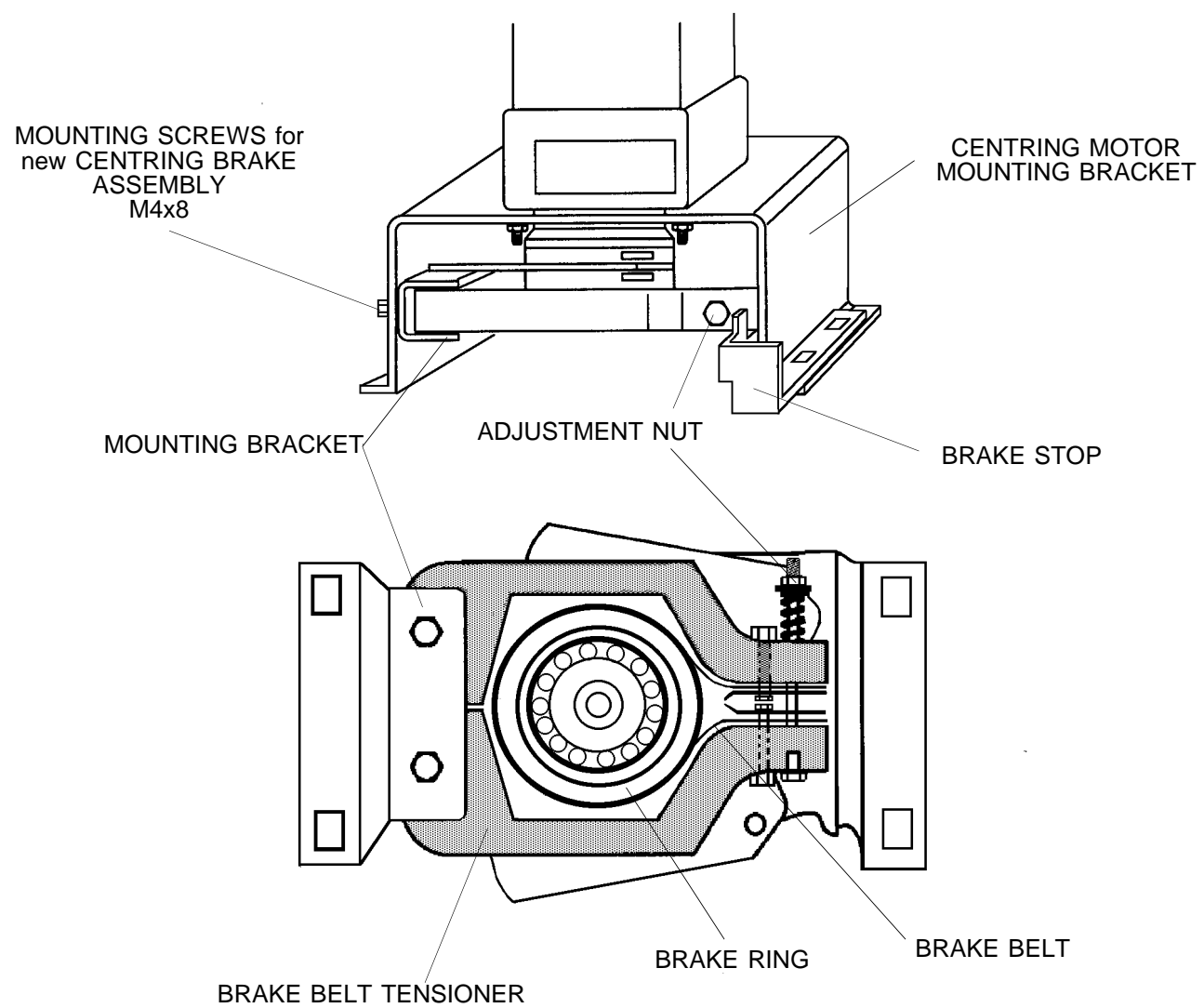


figure 7

- 12.** Connect the CENTRING LINK to the ACTUATOR BRACKET. Use the C-RING, the WASHERS and the CONNECTING PIN removed in PART 1 step 3.
- 13.** Connect SWITCH S9 and S10. Ensure that the wires are routed correctly and that the WIRE TIES are in the correct position (see PART 1 step 5).
- 14.** Connect MOTOR M2.
- 15.** Proceed with the adjustments.

## **ADJUSTMENTS**

### **ADJUSTMENT OF CASSETTE CENTRING BRAKE**

**PURPOSE:** To ensure that the CASSETTE is centred properly and that there is a gap of 1 - 2 mm between the CASSETTE 18x24 cm X and the CENTRING BARS on each side.

#### **NOTE**

**This gap is smaller if larger CASSETTES are used**

**Required Tools:** WRENCH 8 mm. Use WRENCH KIT PN G9901934 or TL2765.

#### **NOTE**

Check the ADJUSTMENT OF CASSETTE CENTRING STOP SWITCHES S14/15 (CCS) first.

1. Open the ML700 FRONT DOOR and take out the 7 Magazines to avoid fogging of fresh Films and close the FRONT DOOR.

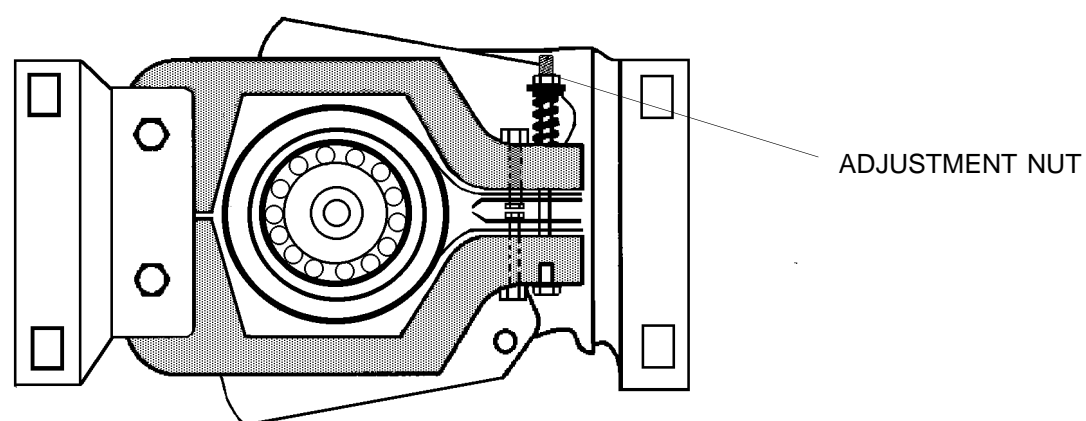
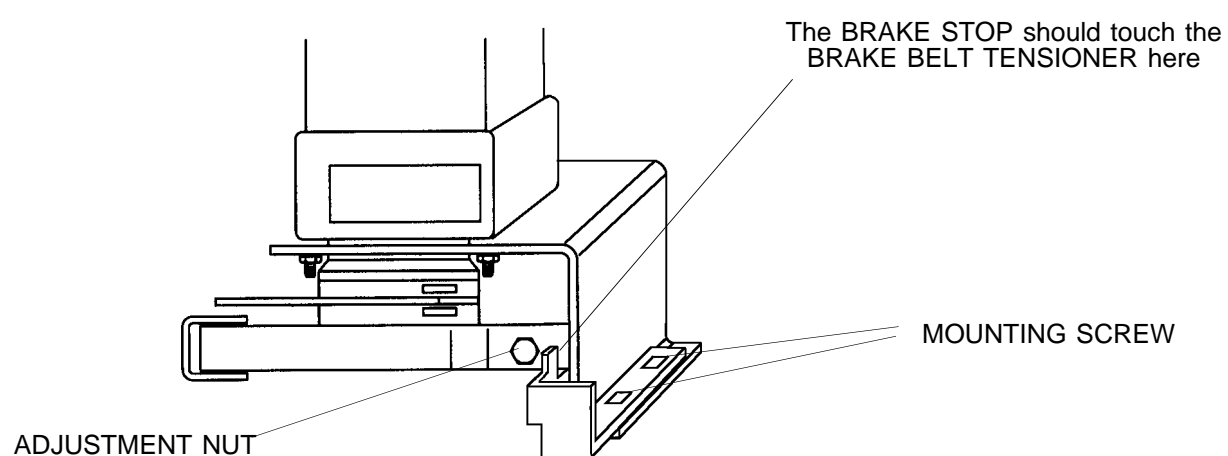


figure 8

#### **NOTE**

##### **No films are required for this adjustment**

2. Open the ML700 TOP COVER.
3. Take off the ML700 left-hand SIDE PANEL.
4. Actuate the INTERLOCK OVERRIDE SWITCH.
5. Check that the BRAKE STOP just touches the BRAKE BELT TENSIONER. If it does not touch loosen the 2 MOUNTING SCREWS and move the BRAKE STOP in as required. Tighten the SCREWS.
6. Feed a 18x24 cm CASSETTE into the ML700.
7. Observe that there is a gap of 1 - 2 mm between CASSETTE (18x24 cm) and CENTRING BAR after centring.

#### **NOTE**

##### **This gap is smaller if larger CASSETTES are used**

8. If the gap is too small the CASSETTE becomes clamped and might not be opened. If the gap is too big the CASSETTE will not be held down by the movable CENTRING BAR CLAMPS and might be pulled out of position by the CASSETTE SUCKER BAR.

If the gap is too small turn the ADJUSTMENT NUT ccw with an 8 mm WRENCH.  
If the gap is too big turn the ADJUSTMENT NUT cw with an 8 mm WRENCH.

9. When the CASSETTE is clamped the 2 BRAKE BELT TENSIONERS make a slight movement. This movement can be minimised by repositioning the BRAKE STOP.
10. Check the adjustment with various cassette sizes.
11. Enable the INTERLOCK OVERRIDE SWITCH, mount the SIDE PANEL and close the TOP COVER. Insert the MAGAZINES and close the FRONT DOOR.
12. Run a few more cycles and ensure that the INTERLOCK SYSTEM is working.

**FINAL TEST**

- 1. Put all MAGAZINES back into the ML700.
- 2. Circle No 26 on the MODIFICATION LABEL.

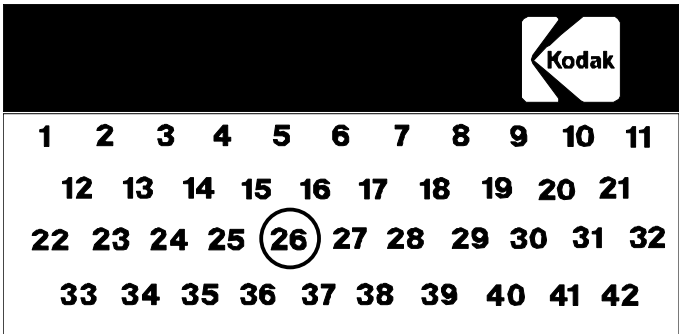


figure 9

- 3. Load/Unload several CASSETTES of different sizes to ensure proper operation.



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